

Attachment 1
County of Henrico's Permit (VPDES Permit VA0088617)

Permit No. VA0088617
Effective Date: March 18, 2003
Modification Date: March 5, 2004
Expiration Date: March 17, 2008

AUTHORIZATION TO DISCHARGE UNDER THE
VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM
AND
THE VIRGINIA STATE WATER CONTROL LAW

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the County of Henrico is authorized to discharge from all portions of the municipal separate storm sewer system owned and operated by the permittee to surface waters of the State.

The authorized discharge shall be in accordance with this cover page, Part I – Storm Water Management Program Requirements, Part II – Conditions Applicable To All VPDES Permits, as set forth herein.

Director, Department of Environmental Quality

Date

STORM WATER MANAGEMENT PROGRAM REQUIREMENTS

A. STORM WATER MANAGEMENT PROGRAM

The permittee shall continue development, implementation, and, where appropriate, refinement of the Storm Water Management Program including pollution prevention measures, management or removal techniques, use of legal authority, and other appropriate means to control the quality and quantity of storm water discharged from the municipal separate storm sewer system. The Storm Water Management Program shall include controls necessary to effectively prohibit the unauthorized discharge of non-storm water into the municipal separate storm sewer system and reduce the discharge of pollutants from the municipal separate storm sewer system to the maximum extent practicable. The permittee shall implement, to the maximum extent practicable, the provisions of the Storm Water Management Program required under this Part as a condition of the permit. All applicable components of the Municipal Separate Storm Sewer System Phase I VPDES Permit Application submitted in accordance with 40 CFR 122.26, and all approved modifications are hereby incorporated by reference into the Storm Water Management Program. The Storm Water Management Program shall cover the term of the permit and the permittee shall update it as necessary, or as required by the Department of Environmental Quality, to ensure compliance with the statutory requirements of the Clean Water Act §402(p)(3)(B). Progress towards the goals and meeting specific program components shall be documented in the Annual Report required by this permit.

1. Contents of the Program

The Storm Water Management Program shall contain the following four elements:

- a. A program to utilize structural and source control measures to reduce pollutants that are discharged through the municipal separate storm sewer system in storm water runoff from commercial and residential areas, including a schedule for implementing the controls.

As part of the program outlined by the County in the Storm Water Management Master Plan:

- (1) The permittee shall continue with the existing maintenance program for structural controls owned and operated by the permittee.

The permittee is responsible for obtaining any required State or federal permits necessary to complete maintenance activities, including permits for land disturbance, wetlands disturbance, dredging, etc.

- (2) The permittee shall adhere to and, where applicable, enforce all those components of The Comprehensive Plan, the Storm Water Management Master Plan, and all storm water related ordinances pertaining to development and redevelopment in the County.
- (3) The permittee shall maintain the existing programs designed to reduce impacts on receiving waters from the operation and maintenance of public streets, roads and highways.

- (4) The permittee shall maintain the existing programs to assure that flood management projects assess the impacts on the water quality of receiving water bodies.
 - (5) The permittee shall maintain its program to reduce the pollutants in discharges to the municipal separate storm sewer system associated with the application of pesticides, herbicides and fertilizers. The permittee shall maintain the public relations plan designed to educate the general public and targeted groups about storm water pollution prevention, which includes the application of herbicides, pesticides, and fertilizer.
- b. A program and schedule to detect and remove, or to notify a discharger to apply for a separate VPDES permit for, unauthorized non-storm water discharges and/or improper disposal into the municipal separate storm sewer system.

As part of the program outlined by the County in the Storm Water Management Master Plan:

- (1) The permittee shall implement and enforce all provisions of the County's Storm Sewer System Discharge Ordinance which prohibits unauthorized non-storm water discharges to the storm sewer system.
- (2) The permittee shall continue the implementation of the current field screening procedures for identifying unauthorized non-storm water discharges and improper disposal into the storm sewer system. Priority shall be placed on segments of the storm sewer system which receive drainage from industrial and commercial sources.
- (3) Where necessary, the permittee shall conduct on-site investigation of potential sources of unauthorized non-storm water discharges. The permittee shall act as expeditiously as possible to require a discharger to eliminate unauthorized non-storm water discharges except discharges identified in Part I.B.4 of this permit, or, if appropriate, to notify the discharger to apply to the Department of Environmental Quality for a Virginia Pollutant Discharge Elimination System (VPDES) permit for the discharge. If a VPDES permit is needed, but not obtained by the discharger, the permittee shall take actions to implement the applicable provisions of the County Code. The permittee shall require immediate cessation of improper disposal practices upon identification of responsible parties.
- (4) To the maximum extent practicable, the permittee shall contain spills and prevent spills from reaching, and subsequently discharging from, the municipal separate storm sewer system. The permittee shall continue to respond to hazardous material spills under the latest "Hazardous Materials Emergency Response Plan" prepared by the County.
- (5) The permittee shall continue implementation of the program to promote, publicize, and facilitate public reporting of the presence of unauthorized non-storm water discharges or water quality impacts associated with discharges from the municipal separate storm sewer system.

- (6) The permittee shall continue implementation of the educational/public information activities relative to proper management and disposal of used oil and toxic materials, including household hazardous wastes.
 - (7) Where necessary, the permittee shall develop and implement controls to limit infiltration of seepage from the municipal sanitary sewer to the municipal separate storm sewer. The permittee shall continue implementation and enforcement of the applicable provisions of the County Code addressing the restriction of interconnection of the sanitary sewer and storm sewer system.
- c. A program to monitor and control pollutants in storm water discharges from municipal landfills, hazardous waste treatment, storage and disposal facilities, industrial facilities subject to Section 313 of the Emergency Planning and Community Right to Know Act, and facilities determined by the permittee to be contributing substantial pollutant loadings.

As part of the program outlined by the County in the Storm Water Management Master Plan:

- (1) The permittee shall inspect any new or previously unidentified facilities (as described above), and may establish and implement control measures as necessary/appropriate for storm water discharges from these facilities.
 - (2) The permittee may monitor, or require the facility to monitor, storm water discharges associated with industrial activity to the municipal separate storm sewer system from facilities described in Part I.A.1.c, above. This monitoring program shall be designed by the County.
- d. A program to continue implementation and maintenance of structural and nonstructural best management practices to reduce pollutants in storm water runoff from construction sites.

As part of the program outlined by the County in the Storm Water Management Master Plan:

- (1) The permittee shall continue to operate in accordance with, and continue enforcement of, the stormwater management requirements of the Chapter 10, Environment, and Chapter 24, Zoning, of the Code of the County of Henrico Virginia, for land disturbing activities.

For land disturbing activities equal to or greater than one acre, the permittee shall notify the construction site owner that they must apply for Storm Water Construction General Permit with the Department of Environmental Quality. The permittee shall maintain records of all approved sites. The permittee shall submit a monthly summary of these approved plans to the Department of Environmental Quality, Piedmont Regional Office, which will include:

- (a). Owners Name
- (b). Owners Address
- (c). Site Name
- (d). Site Address

The Department of Environmental Quality will determine if the land disturbing activity has been covered under a VPDES General Permit and will notify the owner and the permittee if such a permit is required. In addition, the permittee's Erosion and Sedimentation (E&S) Program shall be fully approved by the Department of Conservation & Recreation (DCR). If the permittee does not have a fully approved program, all efforts to achieve approval shall be documented in the annual report.

- (2) The permittee shall continue implementation of the education and training program for construction site operators.

2. Program Modifications

Modifications for the purpose of this part cover major program changes including additions and deletions of program components in the Storm Water Management Program. Routine changes associated with the day-to-day operations of the specific components of the Storm Water Management Program are not subject to the requirements of this Part, but shall be documented in the Annual Report required by this permit.

a. Program Modifications Requested by the Permittee

The permittee shall modify the Storm Water Management Program during the term of the permit in accordance with the following procedures:

- (1) The approved Storm Water Management Program shall not be modified by the permittee without the prior approval of the Department of Environmental Quality, unless in accordance with items (2) and (3) below.
- (2) Modifications adding (but not subtracting or replacing) components, controls or requirements to the approved Storm Water Management Program may be made by the permittee at any time upon written notification to the Department of Environmental Quality.
- (3) Modifications replacing an ineffective or infeasible BMP specifically identified in the Storm Water Management Program with an alternate BMP may be requested at any time. Unless denied by the Department of Environmental Quality, the modification shall be deemed approved and shall be implemented by the permittee within 60 days from DEQ receipt of the request. Such requests shall include the following:
 - (a) an analysis of why the BMP is ineffective or infeasible (including cost prohibitives);
 - (b) expectation on the effectiveness of the replacement BMP; and
 - (c) an analysis of how the replacement BMP is expected to achieve the goals of the BMP to be replaced.
- (4) Modification requests and/or notifications shall be made in writing and signed in accordance with Part II.K of this permit.

b. Program Modifications Requested by the Department of Environmental Quality

This permit may be modified and alternatively revoked and reissued to require modifications of the Storm Water Management Program to:

- (1) address adverse impacts on receiving water quality caused, or contributed to, by discharges from the municipal separate storm sewer system;
- (2) include more stringent requirements necessary to comply with new state or federal statutory or regulatory requirements; or
- (3) include such other conditions deemed necessary by the Department of Environmental Quality to comply with the goals and requirements of the Clean Water Act.

3. Annual Report

The first Annual Report shall be submitted to the Department of Environmental Quality, Piedmont Regional Office, by April 10, 2004. Subsequent Annual Reports shall be submitted by April 10, 2005, April 10, 2006, April 10, 2007, and April 10, 2008. The report shall include the following information for the period covered:

- a. The status of implementing the components of the Storm Water Management Program that are established under Parts I.A.1.a, b, c, and d of this permit. In addition to descriptions of each program element's status, the following specific information shall also be submitted:
 - (1) A summary of the maintenance activities performed on structural BMPs in accordance with Part I.A.1.a.(1) of this permit;
 - (2) The progress on plan reviews of future flood management projects implementing useful water quality measures.
 - (3) The progress on the County's participation in a local or regional public information program to address the following:
 - (a). Any new public education programs concerning the use and disposal of pesticides, herbicides and fertilizers by commercial applicators and by the general public;
 - (b). Any new programs developed to promote, publicize, and facilitate public reporting of the presence of non-storm water discharges into the municipal separate storm sewer system and a summary of the public response to the program;
 - (c). Any new program developed to educate the public on proper management and disposal of used oil and toxic material developed in accordance with Part I.A.1.b.(6) of this permit.

- (4) The number and nature of unauthorized non-storm water discharges or improper disposal practices eliminated under the program by conducting on-site investigations of potential sources of non-storm water discharges developed under Part I.A.1.b.(3) of this permit;
 - (5) A listing of any facilities identified and inspected under Part I.A.1.c.(1) of this permit, a summary of any controls established for these facilities, and the implementation schedule for any controls established for these facilities; and,
 - (6) Results of any monitoring performed in accordance with Part I.A.1.c.(2) of this permit.
- b. Proposed changes to the Storm Water Management Program including those changes that were implemented during the reporting year;
- c. Revisions, if necessary, to the assessment of controls and to the fiscal analysis reported in the permit application, and an assessment of the effectiveness of new controls established by the Storm Water Management Program;
- d. A summary of the progress toward achieving the goals of the Storm Water Management Program through the implementation of the Stream Assessment / Watershed Management Program as indicated in Part I.C.2. of this permit.
- e. Annual program expenditures for the reporting year and the Stormwater Water Management Program budget for the year following each Annual Report.
- f. A summary describing the number and nature of Stormwater Water Management Program enforcement actions, inspections and public education programs;
- g. Identification of water quality improvements or degradation; and,
- h. A summary of cooperative or multi-jurisdictional activities the permittee undertook to facilitate compliance with permit requirements.
- i. In order to track all storm water management BMP's in the Chesapeake Bay watershed, the following information shall be reported annually:
 - (1) Type of permanent BMP installed (structural or non-structural);
 - (2) Geographic location (county-state hydrologic Unit Code);
 - (3) Waterbody the BMP is discharging into;
 - (4) Number of acres treated;
 - (5) Whether or not the BMP is inspected and maintained;
 - (6) How often the BMP is maintained (quarterly, annually, etc.).

1. The permittee shall submit the results of any tracking required by this permit with the annual report required by Part I.A.3. of this permit. The annual report shall be submitted to:

Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060

2. The permittee shall ensure that all pollutants discharged from the municipal separate storm sewer system shall be reduced to the maximum extent practicable through the continued development and implementation of a comprehensive Storm Water Management Program as specified in Part I.A of this permit.
3. The permittee shall effectively prohibit non-storm water discharges into the municipal separate storm sewer system. The permittee may allow discharges of non-storm water or storm water associated with industrial activity as defined at 40 CFR 122.26 through the municipal separate storm sewer system if such discharges are:
 - a. authorized by a separate VPDES permit;
 - b. not identified by the permittee or the Department of Environmental Quality to be significant sources of pollutants to State waters and may include the following: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, street washwater, and discharges or flows from fire fighting; or
 - c. as necessary, the permittee may incorporate appropriate control measures in the Storm Water Management Program required by Part I.A of this permit to ensure the discharges identified in a and b above are not significant sources of pollutants to State waters.
4. The permittee shall operate pursuant to the established legal authority described in the 40 CFR 122.26 (d)(2)(i), or shall obtain the legal authority necessary to control discharges to and from those portions of the municipal separate storm sewer system over which it has jurisdiction. This legal authority may be a combination of statute, ordinance, permit, contract, or an order to carry out all parts of the Storm Water Management Program identified in Part I.A of this permit.
5. To the maximum extent practicable, subject to annual appropriations, the permittee shall provide adequate finances, staff, equipment, and support capabilities to implement all parts of the Storm Water Management Program required by Part I.A of this permit. Where programs operated by entities other than the permittee are included in the permittee's Storm Water Management Program, the permittee shall, to the maximum extent practicable, ensure that such programs remain operational for the term of the permit. However, the permittee shall not be responsible for operating or financing the program in the future if the current operators cease the activity.

6. During the term of the permit, the permittee shall continue to identify any municipal separate storm sewer system outfalls not previously identified.
7. This permit shall be modified or alternatively revoked and reissued if any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the Municipal Separate Storm Sewer System (MS4) that are not consistent with the permit requirements.

C. STREAM ASSESSMENT AND WATERSHED MANAGEMENT PROGRAM EFFECTIVENESS

1. The Department of Environmental Quality and the permittee may assess improvement in the quality of storm water from the municipal separate storm sewer system based on the information required by this Part, plus any additional information generated by the permittee.
2. The permittee shall implement the Stream Assessment and Watershed Management Program as detailed in the Henrico County Environmental Program Manual (August 2001) of the permit reissuance application. The Program shall consist of the following components to be conducted over the term of the permit:
 - a. Development projects (including state road and land development projects) resulting in 2,500 square feet or more of land disturbance shall be subject to the applicable requirements of the Program. These requirements shall include:
 - (1) Designation of the Stream Protection Area (SPA)
The SPA is a riparian buffer 50 feet in width on either side of an intermittent stream with 100 acres or more of drainage area.
 - (2) Reforestation of the SPA
For development projects resulting in greater than 16% impervious cover, the SPA on the development site must remain forested. If the SPA is not currently forested, it must be reforested as part of the development project. Reforestation must be accomplished in accordance with Minimum Standard 9.10 of the Henrico County Environmental Program Manual.
 - (3) Installation of Energy Dissipators / Level Spreaders (ED)
At locations where concentrated stormwater is discharged into the SPA, EDs are installed to introduce the runoff into the SPA in sheetflow fashion. The EDs must be provided in accordance with Minimum Standard 9.01 of the Henrico County Environmental Program Manual.
 - (4) Pollutant removal by providing a Best Management Practice (BMP) depending on the watershed and physical characteristics of the development project, a BMP may be required to achieve the calculated pollutant removal requirement.
 - (5) Contribution to the Environmental Fund
Depending on the watershed and physical characteristics of the development project, a monetary contribution may be required based on the calculated pollutant removal requirement. These monies are used by the County to conduct projects throughout the watersheds in the County to provide water quality improvement.

- b. The permittee shall conduct various projects throughout the watersheds in the County using the Environmental Fund. Expenditures from the Environmental Fund shall occur in the river basin (James River or Chickahominy River) from which the money was generated. Project locations were identified during a County-wide assessment of the streams with 100 acres or more of drainage area (440 miles) and the projects are prioritized based on the assessment data and additional field evaluations. The projects will include the following:
 - (1) Stream Restoration;
 - (2) Streambank Stabilization;
 - (3) Riparian Buffer Restoration;
 - (4) Stream Obstruction Removal;
 - (5) Dumpsite Removal;
 - (6) Regional BMPs / Constructed Wetlands; and
 - (7) Education / Citizen Outreach.
 - c. The permittee shall conduct additional evaluations of various stream reaches as projects are conducted or changes occur that may impact the stream health. The evaluations may involve habitat assessments, rapid bioassessments, water chemistry sampling and stream influence inventories. Additional detailed studies of stream reaches may also be conducted prior to selection and design of specific projects.
 - d. The permittee shall conduct additional bioassessments in accordance with EPA's Rapid Bioassessment Protocol to provide additional baseline data throughout the County as well as evaluate the results of projects conducted as a result of the Stream Assessment and Watershed Management Program. Depending on the need for additional data, four or five bioassessments shall be conducted each year.
3. The permittee shall provide an annual reporting of the following:
- a. For each development project approved for construction during the reporting period, the following information shall be summarized:
 - (1) The area of the project;
 - (2) The pre and post development impervious percentages;
 - (3) The water quality situation;
 - (4) The pollutant removal requirement;
 - (5) The hydrologic unit / watershed in which the project is located;
 - (6) The Watershed Management Area in which the project is located;
 - (7) The length of the stream protection area (SPA) designated;
 - (8) The number of energy dissipators (EDs) provided;
 - (9) The pollutant removal requirement achieved through use of a structural BMP; and
 - (10) The pollutant removal requirement achieved through a contribution to the Environmental Fund and the contribution amount.

- b. For each structural BMP approved for construction during the reporting period, the following information shall be summarized:
 - (1) The type of BMP,
 - (2) The acreage served by the BMP,
 - (3) The hydrologic unit / watershed in which the BMP is located, and
 - (4) The calculated pollutant removal achieved by the BMP.

- c. The following information shall be provided regarding contributions to the Environmental Fund:
 - (1) The total amount collected Countywide and within the James River and Chickahominy River watersheds, and
 - (2) The total amount spent Countywide and within the James River and Chickahominy River watersheds.

- d. A description and estimation of water quality benefit of the projects conducted using the Environmental Fund including:
 - (1) The stream buffers reestablished, including the area of restored buffers, length of affected streams and cost,
 - (2) The streams restored, including lengths, cross-sections, and cost,
 - (3) The streambanks stabilized, including length of affected streams and cost,
 - (4) The educational programs conducted, including cost,
 - (5) The amount of sediment removed from streams and methods of disposal,
 - (6) The number of regional BMPs and wetlands constructed, including area served and cost,
 - (7) The illicit discharges identified and resolved, including cost,
 - (8) The dumpsites cleaned and removed, including cost,
 - (9) The additional habitat assessments, bioassessments, and other studies conducted, including cost, and
 - (10) Any other Environmental Fund expenditure not previously listed.